ABSTRACT

A nozzle needle of a fuel injector is driven in a controlled manner by changing back pressure applied thereto. The back pressure is controlled by a pressure control valve driven by stacked piezoelectric elements. A valve body of the pressure control valve is disposed in a valve chamber having a drain port and a high pressure port which are selectively closed. A diameter D1 of a drain seat, a diameter D2 of a high pressure seat, and a diameter D3 of a piston portion connected to the valve body are set to satisfy a relation: $D1 \geq D2 \geq D3$. In this manner, operation of the pressure control valve is stabilized, and thereby the fuel injector is smoothly and stably operated.